



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEX PRE 17.0046X** Page 1 of 4 [Certificate history:](#)
Issue 0 (2017-12-12)

Status: **Current** Issue No: 1

Date of Issue: 2020-05-28

Applicant: **PMV Automation AB**
Korta Gatan 9
S17154 Solna
Sweden

Equipment: **Digital Valve Positioner**

Optional accessory: Remote Control Unit

Type of Protection: **Intrinsic safety "ia"**

Marking: Ex ia IIC T4 Ga -40°C ≤ Ta ≤ + 85°C

Approved for issue on behalf of the IECEx
Certification Body:

Bjørn Spongsveen

Position:

Certification Manager

Signature:
(for printed version)

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.



Certificate issued by:

DNV GL Presafe AS
Veritasveien 3
1363 Høvik
Norway





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Manufacturer: **PMV Automation AB**
Korta Gatan 9
S17154 Solna
Sweden

Additional
manufacturing
locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

[NO/PRE/ExTR17.0041/00](#)

[NO/PRE/ExTR17.0041/01](#)

Quality Assessment Report:

[NO/NEM/QAR08.0008/10](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The PMV D30/D20 are digital positioners designed primarily to control modulating valve.

The positioner can be used with single or double action actuators with either rotary or linear movement.

Enclosure material is painted aluminum, display and indicator windows of plastic material.

Threaded entries for separate cable glands M20 or ½ " NPT.

The D30/D20 positioner comprises of:

- 4-20mA and Hart modem interface electronic board with, microprocessor, display, keyboard and galvanic isolated 4-20mA feedback.

Or

- FISCO interface electronic board with, microprocessor, display, keyboard.

Both types come with:

- Pneumatic air relay,

- Positional feedback with potentiometer

- Optional are electric pressure sensors board.

- Compartment for electrical connections.

- The positioner can also be equipped with modules limit switches, and a pressure gauge block.

The modules can be factory assembled before delivery or fitted later. The modules for limit switches can contain the following functions:

Two mechanical switches: Two reed switches: Two inductive sensors.

Remote unit, an external unit containing the position potentiometer and indicator.

SPECIFIC CONDITIONS OF USE: YES as shown below:

Specific Conditions of Use

1. The enclosure is made of aluminium and impact or friction caused by external objects shall be avoided in the application.
2. The surface area of the plastic parts on the cover exceeds the limits specified in IEC 60079-0 for II 1G (EPL Ga) for gas group IIC and intensive rubbing or brush charging should be avoided when used in an IIC explosive atmosphere.
3. The cable connection of the Remote Unit with the D30 –unit shall be type A or B in accordance with IEC 60079-25. The cable must be adequately mechanically protected in all instances and have a temperature rating for the ambient temperature range at the site.
4. Control Drawing D4-086C contains the parameters for intrinsic safety.
5. The intrinsic safe circuits of D30 is insulated from earth and complies with the dielectric strength test of 500 V ac.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

1. Added models D20 and D30 FISCO-version. Piezo electric (D20) or solenoid valve functions(D30).

Annex:

[PRE 17.0046X Annex CoC.pdf](#)

Annex to Certificate: IECEx PRE 17.0046X Issue 1

Type designations

D20 and D30 series digital positioners type key.

D	2	A	B	C	D	E	-	F	G	G	H	H	H	-	I	J	K	L	M	N
D	3	A	B	C	D	E	-	F	G	G	H	H	H	-	I	J	K	L	M	N

A = Model no

- D 2 0 Single button interface, LED status
- D 2 1 Single button interface, LED status and LCD
- D 2 2 Full 5 button LCD menu, LED status
- D 3 0 Full 5 button LCD menu, LED status
- D 3 1 Single button interface, LED status and LCD
- D 3 3 Single button interface, LED status

B = Approval, Certificate

- E IEC
- A ATEX
- B INMETRO

C = Function

- S SA D20 E/P (poppet valve)
- H DA (High Flow)

D = Connections Air, Electrical

- G 1/4" G air, M20 x 1,5 electrical
- M 1/4" NPT air, M20x1,5 electrical
- N 1/4" NPT air, 1/2"NPT electrical

E = Connection feature

- 2 2 Electrical conduits
- 4 4 Electrical conduits
- T 2 Electrical conduits, threaded Aux. ventilation
- F 4 Electrical conduits, threaded Aux ventilation

F = Housing material/ Surface treatment

- x *Material (always Aluminium) and treatment Powder epoxy different colours or Tuffram*

G = Mounting options / Spindle

- R x Unit prepared for remote mounting (x any other character)
- x x *Any other combination are with different spindle shafts*

H = Cover and Indicator

- x x x *Combination indicates lid colour and indicator type*
- x x D *Domed indicator not suitable for Da,Db and Dc environments)*

I = Temperature/seals

- x *(Any character not S and V) ambient working temperature range NBR seals*
- S *ambient working temperature range Silicone seals*
- V *ambient working temperature range FPM seals*

J = Input signal/Protocol

- 4 4-20 mA / none

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- 5 4-20 mA / HART
- P Profibus PA
- F Foundation Fieldbus

K = Feedback option, switches

- X No feedback option
- T 4-20 mA transmitter, no switches
- 5 Slot type Namur sensor, P+F SJ2-SN
- 6 Slot type Namur sensor, P+F SJ2-N
- 7 Slot type Namur sensor, P+F SC2-N0-GN
- 8 Slot type Namur sensor, P+F SC2-N0-YE
- G Limit switches Mechanical SPDT ,Gold
- N Namur V3 type sensor, P+F NJ2-V3-N
- P Limit switches Proximity SPDT
- S Limit switches Mechanical SPDT
- U Namur V3 type sensor, P+F NCN4-V3-N0

L = Options, Add in electronics

- 0 No pressure sensor board
- 3 Added pressure sensors
- 2 Added pressure sensors (alternative code)

M = Accessories

- x *External accessories not effecting ia certification*

N= Special Options

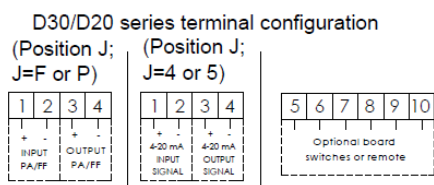
- x *Special options not effecting ia certification*

A A A B C D E - F G G H H H - I J K L M N

Annex to Certificate: IECEx PRE 17.0046X Issue 1

Electrical Parameters for Intrinsic Safety

The transmitters must be connected to safety barriers or isolators according to the **Control Drawing D4-086C** and corresponding to the stated input values of the positioner.



Profibus PA, Fieldbus Foundation, FISCO field device, input signal. Terminals no. 1, 2,3, 4

Maximum input voltage.	U _i :	17,5V
Maximum input current.	I _i :	380mA
Maximum input power.	P _i :	5,32W
Maximum internal capacitance.	C _i :	5nF
Maximum internal inductance.	L _i :	10µH

Power, 4-20mA input signal. Terminals no. 1- 2

Maximum input voltage.	U _i :	28 V
Maximum input current.	I _i :	93 mA
Maximum input power.	P _i :	653 mW
Maximum internal capacitance.	C _i :	11,3 nF
Maximum internal inductance.	L _i :	11,3 µH

4-20mA Output. Terminals no. 3-4

Maximum input voltage.	U _i :	28 V
Maximum input current.	I _i :	93 mA
Maximum input power.	P _i :	653 mW
Maximum internal capacitance.	C _i :	22 nF
Maximum internal inductance.	L _i :	11.3 µH

Switches, Mechanical or Proximity. Terminals 5-6-7-8-9-10 (2 circuits 3 wire)

Maximum input voltage.	U _i :	28 V
Maximum input current.	I _i :	45 mA
Maximum input power.	P _i :	315 mW
Maximum internal capacitance.	C _i :	1 nF
Maximum internal inductance.	L _i :	1 µH

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Namur switch and isolator barrier. Terminals 5-6-7-8-9-10 (2 circuits 3 wire)

Maximum input voltage.	U _i :	16 V
Maximum input current.	I _i :	25 mA
Maximum input power.	P _i :	34 mW
Maximum internal capacitance.	C _i :	150 nF / 100 nF / 30 nF Depending on the type of switch
Maximum internal inductance.	L _i :	50 μH / 100 μH / 150 μH Depending on the type of switch

Specific safety parameters for the different types of switches according to
Control Drawing D4-086C (derived from Certificates PTB 00 ATEX 2032 X, PTB 00 ATEX 2049 X, PTB 99 ATEX 2219 X)

Degrees of protection (IP Code)

IP 66 according to EN 60529

Ambient temperature:

-40°C Ta to +85°C

Routine tests

None